

**REMARKS**

The present application relates to hybrid maize plant and seed 34M94. Claims 1-32 are currently pending in the present application. Applicant respectfully requests consideration of the following remarks.

**Detailed Action*****A. Specification***

The Examiner has objected to the specification for containing blank lines on page 7 in the bottom paragraph and page 58. Applicant respectfully submits that the actual ATCC deposit will be delayed until the receipt of notice that the application is otherwise in condition for allowance. While Applicant does not agree that this rejection is appropriate under 37 C.F.R. §§ 1.801-1.809, Applicant will refrain from deposit of Hybrid 34M94 until allowable subject matter is indicated. Once such notice is received, an ATCC deposit will be made, and the specification will be amended to contain the accession number of the deposit, the date of the deposit, a description of the deposited biological material sufficient to specifically identify it and to permit examination and the name and address of the depository. The claims (1, 5 and 7) will also be amended to recite the ATCC deposit number. In addition, Applicant submits that at least 2,500 seeds of Variety 34M94 will be deposited with the ATCC. In view of this assurance, the rejection under 35 U.S.C. § 112, first paragraph, should be removed (MPEP § 2411.02). Such action is respectfully requested.

***B. Claim Objections***

The Examiner objects to claims 1, 5, 6, 7, 12 and 16. The Examiner objects to claims 1, 5 and 7 for the ATCC Accession No. being left blank. As stated above, Applicant will amend the claims upon ATCC deposit. The Examiner objects to claim 6 for the use of "A". Applicant has now amended claims 6, 12, 16, 25 and 22 to include --The-- as suggested by the Examiner, thereby alleviating this objection.

The Examiner also objects to claims 12 and 16 for the phrase "A hybrid maize plant". Applicant has now amended these claims to read --The hybrid maize plant-- as suggested by the Examiner, thereby alleviating this objection.

### C. Claims

Applicant acknowledges the addition of new claims 33 through 41. The new claims do not add new matter as there is literal support for the claims in the originally filed specification (pages 44-46, specification).

### Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-32 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1-32 stand rejected as indefinite in the designation of "34M94". The Examiner states that this designation does not denote an art recognized designation of a maize plant and hence does not state the metes and bounds of the claimed invention. The Examiner further states that Applicant must provide the appropriate amendment to insert the deposit information at the time of allowance in both the specification and the claims.

Applicant respectfully traverses this rejection. Claims 1-32 are patently distinct because they involve a novel maize seed, plants, plant parts, and methods. Applicant's detailed arguments are set forth *infra* in the Issues under 102/103 section. Nonetheless, Applicant asserts one ordinarily skilled in the art would clearly understand that this designation is drawn to a new and distinct hybrid maize seed with the designation of 34M94 and the morphological and physiological traits that are disclosed in the specification. (See Tables 1-4, pgs. 17-39). It is common practice within plant breeding that a new and distinct maize seed is designated with a numerical number such as 34M94 which defines the claimed hybrid maize seed which will be deposited under an ATCC accession number. The use of such a designation is a common practice within the art and would be well understood by one skilled in the art to be two distinct and unrelated hybrid maize seeds. In addition, as provided in 37 C.F.R. §§ 1.801-1.809, Applicant wishes to reiterate they will refrain from deposit of Hybrid 34M94 until allowable subject matter is indicated. Once deposit is completed Applicant will amend claims 1, 5 and 7 accordingly and this rejection will be moot. Therefore, Applicant submits this terminology is not indefinite and reconsideration is respectfully requested.

Claims 5 and 7 stand rejected for the phrase "capable of expressing". Applicant respectfully traverses this rejection. The term is not indefinite and would be understood by one skilled in the art to mean the ability to manifest the morphological and physiological characteristics. In addition, Applicant asserts that plants regenerated from tissue culture may be stunted and have other changes in growth habit, but once the Hybrid 34M94 regenerated plant is self-pollinated and the seed is grown under normal growing conditions, the plant will again express the same traits as Hybrid 34M94. Applicant has deleted the term in claim 5, thereby alleviating the rejection. Applicant asserts claim 7 is in condition for allowance.

Claim 6 stands rejected for the phrase "the cells or protoplasts being from a tissue" as it is indefinite because it is unclear what the metes and bounds of "being from" are. Applicants have now amended claim 6 to read --the cells or protoplasts of said cells having been isolated from a tissue--, as suggested by the Examiner thereby, alleviating this rejection.

Claim 8 stands rejected as indefinite because the plant of claim 2 is not male sterile. Applicant has now amended the claim to read --further comprises a genetic factor conferring male sterility--, as suggested by the Examiner, thereby obviating this rejection.

Claims 9, 13, 17, 22, 26 and 30 stand rejected as indefinite because the claims do not set forth any positive method steps leading to the maize plant at line 1 of the claims. Applicant respectfully submits the claims are directed to a method for producing a maize plant wherein the maize plant of claim 2, or its parts, is used as a source of plant breeding material. This method clearly defines a method utilizing the proprietary hybrid 39M94 to produce a maize plant. The techniques described in the present application in the "Background of the Invention" (pages 1-7) and "Further Embodiments of the Invention" (pages 40-52) sections clearly define and distinctly claim positive method steps for producing maize plants for small or large scale production. Applicant respectfully requests the Examiner to withdraw this rejection.

Claims 10, 14, 18, 23, 27, and 31 are indefinite for improper antecedent basis. The Examiner states the claims are drawn to a "maize plant breeding program" while the claims to which they depend are drawn to a method. Applicant has amended the claims in accordance to Examiner's suggestion by changing the recitation "maize plant breeding program" in line 1 of claims 10, 14, 18, 23, 27 and 31 with --method--, thus alleviating this rejection.

Claims 11, 15, 19, 24, 28 and 32 are indefinite in their recitation of "excellent grain yield potential", "strong stalks" and "particularly suited.... of the United States", as the Examiner states these terms are relative and do not state the metes and bounds of the claimed invention.

Applicant respectfully traverses this rejection. Each of these claims recites two requirements, first that 34M94 be an ancestor of the plant and second, that the claimed plant be "capable of expressing a combination of at least two 34M94 traits" selected from a Markush grouping. Applicant notes that the Markush listing is directed to "34M94" traits. Thus, Applicant submits that the recitation of 34M94 traits clearly delineates the traits listed as those which are from 34M94 or ancestors thereof. The recitation of "34M94" in front of the term traits clearly indicates that the traits must be originating from 34M94. This is particularly so since the claim also requires that the plant 34M94 must be an ancestor of the claimed plant. Applicant further submits that the adjectives used within the claims are not unduly narrative or imprecise as they do clearly characterize and positively recite the degree of expression of the particular traits within the application in Tables 1-4 (pages 18-39). This terminology is well known in the art and commonly used within breeding techniques of hybrid plants. In addition, Applicant asserts it is exactly clear what states or geographic areas define these regions and would be understood to one skilled in the art. Applicant respectfully submits that this language is not indefinite and would be understood by one in the art and is the terminology of use within the art. Therefore, Applicant respectfully requests reconsideration.

Furthermore, in Georgia-Pacific, the Federal Circuit stated that "...the policy of the patent statute contemplates granting protection to valid inventions, and this policy will be defeated if protection were to be accorded to those patents which were capable of precise definition." Georgia-Pacific Corp. v. U.S. Plywood Corp., 258 F.2d 124, 136, 118 U.S.P.Q. 122 (2nd Cir.). While some decisions have advocated the general statement that "[a]n invention must be capable of accurate definition, and it must be accurately defined, to be patentable, (See United Carbon Co. v. Binney & Smith Co., 1942, 317 U.S. 228, 237, 63 S.Ct. 165, 170, 87 L.Ed. 232), the Federal Court has stated that "such general statements, however, must be viewed in the context of circumstances. Objectionable indefiniteness must be determined by the facts in each case, not by reference to an abstract rule." Georgia-Pacific at 136. "Patentable inventions cannot always be described in terms of exact measurements, symbols and formulae, and Applicant

necessarily must use the meager tools provided by language, tools which admittedly lack exactitude and precision. If the claims read in light of the specification, reasonably apprise those skills in the art both in utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more." *Id.* (See North American Vaccine Inc. v. American Cyanamide Co., 7 F.3d 1571, 28 U.S.P.Q.2d 1333, 1339 (Fed. Cir. 1993)). Moreover, it is against the policy of the patent statute to bar patent protection for inventions that are incapable of precise definition. Georgia-Pacific at 136. With respect to the above-mentioned terms, the claims are as precise as the subject matter of the invention permits. Therefore, Applicant respectfully requests reconsideration of the claims.

Claims 16 and 29 stand rejected as indefinite because a hybrid maize plant is not produced by a backcrossing technique. Applicant respectfully traverses this rejection. The specification specifically says "recurrent selection breeding, backcrossing for example, can be used to improve inbred lines in a hybrid which is made using those inbreds. Backcrossing can be used to transfer a specific desirable trait from one inbred or source to an inbred that lacks that trait" (page 3, specification). In addition, Applicant asserts that it is well known to one ordinarily skilled in the art that backcrossing is a process of mating of a hybrid to one of its parents (Walter R. Felir, ed., Principals of Cultivar Development, Vol. 1, pages 360-380, 1987). Therefore Applicant respectfully submits claims 16 and 29 are definite as taught by the specification.

Claims 11, 15, 19, 24, 28 and 32 stand rejected for the phrase "capable of expressing" as indefinite because it does not state a positive feature of the claimed invention. Applicant respectfully traverses this rejection. However in order to expedite prosecution, Applicant has amended claims 11, 15, 19, 24, 28 and 32 by deleting the phrase "capable of expressing" and amending the claims to read --is expressing-- thereby stating a positive feature of the claimed invention as suggested by the Examiner. Applicant respectfully submits these claims are now in condition for allowance.

Claim 21 stands indefinite because the plant of claim 20 is not male sterile. Applicant has now amended claim 21 to read --further comprises a genetic factor conferring male sterility--, as suggested by the Examiner, thereby obviating this rejection.

In light of the above remarks, Applicant submits that claims 1-32 clearly define and distinctly claim the subject matter Applicant regards as the invention. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

**Rejections Under 35 U.S.C. § 112, First Paragraph**

Claims 11, 12, 15, 16, 19, 24, 25, 28, 29 and 32 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Examiner states the claimed invention lacks written description under current written description guidelines. The Examiner states the claims are drawn to corn progeny plants and transgenic corn plants having undisclosed identifying characteristics whereby only the characteristics of the deposited maize line 34M94 are known. The Examiner further states the effect of transgenes on the physiological and morphological characteristic of a transgenic 34M94 maize plant or progeny thereof, is not sufficiently described whereby one of skill in the art could recognize the claimed maize plant. The Examiner states that while claims 11, 15, 19, 24, 28 and 32 set forth at least two 34M94 traits, because the terms used to described the traits are relative terms, lacking a comparative basis, these traits do not adequately define or distinguish 34M94 progeny maize plants.

Applicant respectfully traverses this rejection. Applicant has amended claims 11, 15, 19, 24, 28 and 32 by adding the threshold, having 50% of the ancestral alleles, that limits the variation permitted among the genus, as well as an assayable function, capable of expressing at least a combination of two traits of 34M94. There is literal support for the amended claims found in the specification on page 3 and beginning on page 32 of the instant specification. Plant breeding techniques known in the art and used in the maize plant breeding program include, but are not limited to the following: recurrent selection backcrossing, pedigree breeding, restriction length polymorphism enhanced selection, genetic marker enhanced selection and transformation. With the amendments to the above-stated claims, Applicant has identified a transgenic 34M94 plant (claim 12), a 34M94 plant further comprising genes transferred by backcrossing (claim 14),

or a maize plant wherein at least one ancestor is maize variety 34M94 (claim 15) by defining a particular threshold that limits variation and reciting a functional test to identify such plants. In addition, Applicant has drafted new claims 33-41 which Applicant believes come within the purview of the written description requirement and do not add new matter. Under the written description requirement, Applicant should be allowed to claim the progeny of a cross of maize plants crossed with 34M94 with phenotypic characteristics since distinguishing identifying characteristics in the chemical and biotechnological arts, dealing with DNA, are those such as: partial structure, physical and/or chemical properties, functional characteristics, known or disclosed correlation between structure and function, method of making, and combinations of the above. In plants, these identifying characteristics are those detectable in the phenotype which are manifested through gene expression. Claims to a particular species of invention are adequately described if the disclosure of relevant identifying characteristics are present in the application. Again, one of ordinary skill in the art is reasonably apprised in knowing that a plant crossed with 34M94 will result in a plant having half of the genetic contribution of 34M94. A further limitation set by Applicant is that the plants must be capable of expressing a combination of at least two phenotypic characteristics of 34M94.

Further, Applicant asserts the specification supplies an extensive definition and description of 'transgene' and transgenes of interest. (See generally pages 36-48 and pages 42-46 for an extensive list of potential transgenes.) Applicant also notes, a person having skill in the art could insert a DNA gene into a selected maize plant. Applicant has defined transgenes in the present application in the paragraph that spans pages 36-37 as follows:

With the advent of molecular biological techniques that have allowed the isolation and characterization of genes that encode specific protein products, scientists in the field of plant biology developed a strong interest in *engineering the genome of plants to contain and express foreign genes, or additional genes* (perhaps driven by different promoters) in order to alter the traits of a plant in a specific manner. *Such foreign, additional and/or modified genes are referred to herein collectively as "transgenes"*. Over the last fifteen to twenty years several methods for producing transgenic plants have been developed, and *the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid 34M94*.

(emphasis added) The present application clearly describes and defines a transgene to be a gene transferred into a plant wherein the product of that gene is expressed. This expression will confer

a new or improved trait into that plant. However, this gene is but a tiny fraction of the entire genome. In other words, the plant of claim 12 is distinguishable from the prior art plants just as is hybrid 34M94 without the transgenes. Further, the plant of claim 12 also contains a trait(s) that is either improved or additional to the traits of the maize plant of claim 2. The 34M94-transgene plant still expresses the unique combination of traits of 34M94 without the transgenes with the exception of the traits expressed by the transgenes. The trivial modifications introduced by the transgenes to the unique invention of 34M94 are clearly supported and described in the present application.

In addition, Applicant respectfully submits that "[t]he test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. . . . If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more. . . . The degree of precision necessary for adequate claims is a function of the nature of the subject matter." Miles Laboratories, Inc. v. Shandon Inc., 997 F.2d 870 (Fed. Cir. 1993).

Claims 13, 14, 17, 18, 26, 27, 30 and 31 stand rejected as containing subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner states the Applicant has failed to adequately describe the maize plant at claims 12, 16, 25 and 29 and the methods for developing a maize plant in a maize plant breeding of the instant claims are not enabled.

Applicant respectfully traverses this rejection and submits that the claims have now been amended to properly be drawn from a method thereby obviating this rejection. In addition, Applicant directs the Examiner to the detailed assertions supra, whereby Applicant discloses how and where the specification has adequately described the maize plants of claims 12, 16, 25 and 29.

In light of the above remarks, Applicant submits that claims 1-32 clearly describe and distinctly claim the subject matter Applicant regards as the invention. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, first paragraph.



**Issues Under 35 U.S.C. § 102/103**

Claims 11, 15-19, 24, 28, 29-31 and 32 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hoffbeck (U.S. Patent 6,211,445). The Examiner states that Hoffbeck discloses "a hybrid maize plant designated 34W67, which Applicant admits is similar to the hybrid maize plant of the instant invention". The Examiner further states that 34W67 hybrid maize plant inherently discloses such relative traits as "excellent grain yield potential", "particularly suited to the Central Corn Belt region of the United States" and "a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain". The Examiner concludes stating that the claimed invention is *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Hoffbeck.

Applicant respectfully traverses this rejection and requests reconsideration of claims 1-32. The Applicant would like to point out that the inventions 34M94 and 34W67 are not the same inventions. Nor are their differences minor morphological variations. Applicant submits that the claimed plant cannot be rendered obvious as it possesses a unique combination of traits which confers a unique combination of genetics. Moreover, Applicant claims a method of making a plant which did not previously exist. Pursuant to the recent Federal Circuit decision, Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education & Research, No. 00-1467 (Fed. Cir. Aug. 30, 2002), "a novel patented product is not "anticipated" if it did not previously exist." *Id.* This is the case whether or not the process for making the new product is generally known. *Id.* The invention 34M94 has not previously existed as it is the result of the crossing the two maize inbred lines GE515419 and GE567914.

Furthermore, when looking at the tables of both inventions, hybrids created using 34M94 as one of the parents are clearly not anticipated by hybrids made using 34W67 as one of the parents. The inventions 34M94 and 34W67 differ for various traits that are not minor. For example, 34M94 has more resistance to Common Rust when compared with 34W67. As reported in Table 1, 34M94 has a resistance of 6 (page 19). As reported in Table 1 of 6,211,445 Patent, 34W67 demonstrates a lower tolerance, with more susceptibility of 3. Another example, as reported in Table 4, 34M94 has a Staygreen of 7 (page 38). As reported in Table 4 of the 6,211,445 Patent, 34W67 demonstrates a lower score of 5. A third example of the differences is

that 34M94 exhibits a superior resistance to Gray Leaf Spot than 34W67. As reported in Table 1, 34M94 has a resistance of 6. As reported in Table 1, 34W67 has a resistance of 4.

Other traits which differ between the two inventions include: anther color (34M94 yellow, 34W67 red), length of ear node leaf (34M94 91.7, 34W67 89.0), and resistance to Anthracnose Stalk Rot (34M94 average resistance, 34W67 susceptible).

The aforementioned examples all illustrate that there are large differences between 34M94 and 34W67. The examples listed are not exhaustive but they do give ample evidence that the inventions are not the same. Furthermore, when looking at the tables of both inventions, hybrids created using 34M94 as one of the parents are clearly not anticipated by hybrids made using 34W67 as one of the parents.

Applicant further submits that the claims do not simply recite traits, but instead recites these specific traits only to the extent that they are "34M94" traits; thereby being derived from the seed/germplasm of 34M94. Note, variety with respect to agricultural variety, can be defined as a group of similar plants that by structural features and performance can be identified from other varieties within the same species. When looking at maize plants it would be possible for one ordinarily skilled in the art to find many traits that are similar between varieties such as the disease resistance or growth habit. Nonetheless, the claim also recites that the claimed plant must have 34M94 as an ancestor further indicating that these traits must originate from the 34M94 plant not 34W67. In response to the Examiner's contention that one could not distinguish the claimed plant from the prior art which shows each of these traits, Applicant submits that one can easily tell by reference to the plants breeding history, which can be confirmed by its molecular profile whether the plant did indeed have plant 34M94 as an ancestor and expressed two or more "34M94" traits. Further, any phenotypic trait that is expressed is a result of a combination of all of the genetic material present in the plant, and 34M94 will have its own unique genetic background that will give rise to the claimed plant and this profile along with its combination with other plants will result in a unique combined genetic profile that is the product claimed.

Furthermore, there is no expectation of success that the crossing of the Hybrid 34W67 with some yet to be identified plant would yield a plant with two of the traits enumerated in the claimed invention and at least 50% of its ancestral alleles from 34M94 because that particular

plant did not begin with the claimed seed 34M94 which is essential. Applicant asserts that it is not the phenotypic characteristics alone that are claimed and taught in the instant invention. It is a combination of physiological and morphological characteristics, as claimed, which make the present Hybrid non-obvious and not anticipated over Hoffbeck. Further, In re Thorpe, states that "a product by process claim may be properly rejected over prior art teaching the same product produced by a different process", as noted by the Examiner. 227 U.S.P.Q. 964, 966 (Fed. Cir. 1985). However, Applicant submits that this is not the same product physiologically or morphologically as the cited prior art as can be evidenced by one skilled in the art through analysis of the data tables in each. In addition, it is impermissible to use hindsight reconstruction and the benefit of Applicant's disclosure to pick among pieces which are present in the art, there must be some suggestion to make the combination and an expectation of success. In re Vaeck, 20 U.S.P.Q.2d 1434 (Fed. Cir. 1991). Further, any phenotypic trait that is expressed is the result of the genetic material present in the plant, and 34M94 will have its own unique genetic background that will give rise to the claimed plant and this profile along with its combination with other plants will result in a unique combined genetic profile that is the product claimed. Thus, the present application deserves to be considered new and non-obvious compositions in their own right as products of crossing when 34M94 is used as a starting material.

In light of the above, Applicant respectfully requests the Examiner reconsider and withdraw the rejection to claims 1-32 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hoffbeck (U.S. Patent 6,211,445).

#### **Issues Under 35 U.S.C. § 103**

Claims 11, 15-19, 24, 28, 29-31 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hoffbeck (U.S. Patent 6,211,445). The Examiner states the "claims are drawn to a hybrid maize plant exhibiting all of the characteristics of 34M94".

Applicant respectfully traverses this rejection. When looking at a maize plant it would be possible to find many traits that are similar between varieties such as the color of flowers or growth habit. However, to say there are similarities in phenotype between two varieties is not the same as saying that the two varieties have the same morphological and physiological characteristics as a whole, or that one is an obvious variant of the other. Further, similarity in

phenotype does not mean that the two varieties will perform similarly, particularly in a breeding program. As stated above, variety with respect to agricultural variety may be defined as a group of similar plants that by structural features and performance can be identified from other varieties within the same species.

Applicant submits that Hybrid 34W67 does not exhibit the same characteristics as 34M94. Applicant will illustrate how 34M94 and 34W67 are different. It must be recognized that the hybrids provided by this invention are themselves unusual and unobvious results of a common process, in that they provide the unique combination of excellent grain yield potential, particularly suited to the Central Corn Belt region of the United States and a relative maturity of 109 (see pages 17-20, specification). Nonetheless, Hybrid 34M94 deserves to be considered as a new and non-obvious composition in its own right as does its tissue culture as products of the process when 34M94 is used as starting material. Applicant points out that 34M94 is a unique plant hybrid which never before existed until Applicant filed the application and until its deposit of the same. While Hoffbeck does teach the general regeneration of maize plants from tissue culture techniques, it does not teach or suggest the use of the unique maize hybrid 34M94. As will be demonstrated below, several morphological and physiological characteristics of Hybrid 34M94 are either different from or not present in 34W67.

For example, Hybrid 34M94 has above average resistance to Common Rust while 34W67 is susceptible to the disease. The varieties are also different with respect to anther color, Staygreen, length of ear node leaf and disease resistance. Differences between the two varieties are summarized in the table below:

<u>CHARACTERISTICS</u>	<u>34M94</u>	<u>34W67</u>
Anther color	Yellow	Red
Staygreen	5	4
Length of ear node leaf (cm)	91.7	89.0
Disease Resistance	Resistance to Common Rust and Anthracnose Stalk Rot	Susceptible to Common Rust and Anthracnose Stalk Rot

This comparison clearly shows that 34W67 does not exhibit the characteristics of hybrid 34M94. Further, the present application clearly shows in Table 1 at pgs. 18-20 and Tables 2-4 at pgs. 23-39 that hybrid 34M94 exhibits more resistance to Gray Leaf Spot, higher Staygreen, a higher ear height and the aforementioned characteristics. This unique and unobvious combination of traits makes hybrid 34M94 particularly well suited to the Central Corn Belt regions of the United States.

In light of the above, Applicant respectfully requests the Examiner reconsider and withdraw the rejection to claims 1-32 under 35 U.S.C. § 103(a).

Applicant acknowledges that claims 1-10, 12-14, 20-23 and 25-27 are free of the prior art because the claims neither suggest nor teach the 34M94 hybrid maize plant or a maize plant having all of the morphological and physiological characteristics of the 34M94 hybrid maize plant of the instant claims or methods of use. This clearly indicates that the hybrid 34M94 as a whole is considered distinguishable from the prior art for the purposes of novelty and non-obviousness. In any event, the deposit of a representative seed of Hybrid 34M94 should satisfy the description requirement. In light of the above, Applicant respectfully submits the above rejections are clearly improper and request reconsideration and withdrawal of the rejections.

### Conclusion

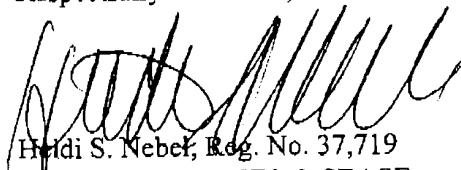
In conclusion, Applicant submits in light of the above amendments and remarks, the claims as amended are in a condition for allowance, and reconsideration is respectfully requested.

No additional fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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- pw/LA -

Application No. 09/759,877

**AMENDMENT — VERSION WITH MARKINGS  
TO SHOW CHANGES MADE**

**In the Specification**

The paragraph beginning at page 40, line 32 has been amended as follows:

With the advent of molecular biological techniques that have allowed the isolation and characterization of genes that encode specific protein products, scientists in the field of plant biology developed a strong interest in engineering the genome of plants to contain and express foreign genes, or additional, or [modified] modified versions of native or endogenous genes (perhaps driven by different promoters) in order to alter the traits of a plant in a specific manner. Such foreign, additional and/or modified genes are referred to herein collectively as "transgenes". Over the last fifteen to twenty years several methods for producing transgenic plants have been developed, and the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid maize line 34M94.

**In the Claims**

Please amend claims 5-6, 8, 10-12, 14-16, 18, 19, 21, 23-25, 27-29 and 31-32 as follows:

**5. (Amended)**

A tissue culture of regenerable cells of a hybrid maize plant 34M94, representative seed of said hybrid maize plant 34M94 having been deposited under ATCC accession number \_\_\_\_\_, wherein the tissue regenerates plants capable of expressing all the morphological and physiological characteristics of said hybrid maize plant 34M94].

**6. (Amended)**

[A] The tissue culture according to claim 5, the cells or protoplasts of said cells having been isolated from a tissue [being from a tissue] selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

## 8. (Amended)

The maize plant of claim 2 wherein said plant [is male sterile] further comprises a genetic factor conferring male sterility.

## 10. (Amended)

The [maize plant breeding program] method of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

## 11. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 2, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

## 12. (Amended)

[A] The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more transgenes.

## 14. (Amended)

The [maize plant breeding program] method of claim 13 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.



## 15. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 12, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

## 16. (Amended)

[A] The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

## 18. (Amended)

The [maize plant breeding program] method of claim 17 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

## 19. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 16, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

## 21. (Amended)

The maize plant of claim 20 wherein said maize plant [is male sterile] further comprises a genetic factor conferring male sterility.

## 23. (Amended)

The [maize plant breeding program] method of claim 22 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

## 24. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 20, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

## 25. (Amended)

[A] The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more transgenes.

## 27. (Amended)

The [maize plant breeding program] method of claim 26 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

## 28. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 25, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

## 29. (Amended)

[A] The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

## 31. (Amended)

The [maize plant breeding program] method of claim 30 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

## 32. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 29, [said maize plant capable of] wherein said maize plant has derived at least 50% of its ancestral alleles from 34M94 and is expressing a combination of at least two 34M94 traits selected from the group consisting of: excellent grain yield potential, strong stalks, resistant to Anthracnose stalk rot, resistant to brittle (green) snapping of stalks, resistant to Gray Leaf Spot, resistant to Fusarium ear rot, white cobs, particularly suited to the Central Corn Belt region of the United States and a relative maturity of approximately 109 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

Please add new claims 33 - 41 as follows:

33. (New)

A method of making a hybrid maize plant designated 34M94 comprising:  
crossing an inbred maize plant GE568044, deposited as \_\_\_\_\_ with a second inbred maize plant  
GE533486, deposited as \_\_\_\_\_; and  
developing from the cross a hybrid maize plant representative seed of which having been  
deposited under ATCC Accession Number \_\_\_\_\_.

34. (New)

A method of making an inbred maize plant comprising:  
obtaining the plant of claim 2 and  
applying double haploid methods to obtain a plant that is homozygous at  
essentially every locus, said plant having received all of its alleles from maize hybrid  
plant 34M94.

35. (New)

A method for producing an 34M94 progeny maize plant comprising:  
(a) growing the plant of claim 2, and obtaining self or sib pollinated seed therefrom; and  
(b) producing successive filial generations to obtain a 34M94 progeny maize plant.

36. (New)

A maize plant produced by the method of claim 35, said maize plant having received all  
of its alleles from hybrid maize plant 34M94.

37. (New)

The maize plant of claim 36 wherein said maize plant comprises 2 or more 34M94  
characteristics described in Table 1 or 2.

## 38. (New)

A method for producing a population of 34M94 progeny maize plants comprising:

- (a) obtaining a first generation progeny maize seed produced by crossing the maize plant of claim 2 with a second maize plant;
- (b) growing said first generation progeny maize seed to produce F<sub>1</sub> generation maize plants and obtaining self-pollinated seed from said F<sub>1</sub> generation maize plants; and
- (c) repeating the steps of growing and harvesting successive filial generations to obtain a population of 34M94 progeny maize plants.

## 39. (New)

The population of 34M94 progeny maize plants produced by the method of claim 38, said population, on average, deriving at least 50% of its ancestral alleles from 34M94.

## 40. (New)

A 34M94 maize plant selected from the population of 34M94 progeny maize plants produced by the method of claim 38, said maize plant deriving at least 50% of its ancestral alleles from 34M94.

## 41. (New)

The method of claim 38, further comprising applying double haploid methods to said F<sub>1</sub> generation maize plant or to a successive filial generation thereof.